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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,511	10/31/2003	Michel A. Riou	084061-0500	9611

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EXAMINER

FIDLER, SHELBY LEE

ART UNIT	PAPER NUMBER
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2861

DATE MAILED: 01/10/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/698,511	Applicant(s) RIOU ET AL.	
	Examiner Shelby Fidler	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 27-29 is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-26, and 30-39 is/are rejected.
- 7) ☐ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Response to Amendment

The affidavit filed on 12/18/2005 under 37 CFR 1.131 is sufficient to overcome the Anderson et al. (US 6643220) and Beauchamp et al. (US 6536863) references.

Allowable Subject Matter

Claims 27-29 are allowed.

The following is an examiner's statement of reasons for allowance: The primary reason for the allowance of claims 27-29 is the inclusion of the limitation of a means for storing condensate, wherein the means for storing includes an inlet and means for automatically occluding the inlet when disconnected from the printing system.

The most pertinent prior art, not relied upon, is Kim et al. (US 6101356). Kim teaches occluding the inlet, but does not teach automatically occluding the inlet when disconnected from the printing system.

Claim Objections

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The primary reason for indicated allowable subject matter of claim 6 is the inclusion of the limitation of a receptacle that includes an inlet and a means for automatically occluding the inlet when disconnected from the printing system. The most pertinent prior art, not relied upon, is Kim et al. (US 6101356). Kim teaches occluding the inlet, but does not teach automatically occluding the inlet when disconnected from the printing system.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4, 7-10, 12, 13, 18, 19, 21, and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson et al. (US 6176563 B1) in view of Berg et al. (US 6659587 B2).

With regards to claim 1, Anderson teaches a printing system comprising:

an ink dispenser configured to deposit ink upon a print medium (*element 104, Figure 1*);

a condenser configured to condense vapor into a condensate (*element 126, Figure 1*); and

a receptacle configured to collect the condensate (*element 112, Figure 1*);

Anderson does not expressly teach that the receptacle is perforate. Berg discloses a receptacle that is perforate to permit a portion of the condensate to evaporate (*col. 4, lines 13-15*).

With regards to claim 2, Anderson teaches that the condenser includes:

a conduit having a conduit interior (*element 130, Figure 2*); and

a coolant source connected to the conduit and configured to supply coolant into the conduit interior (*col. 5, lines 15-16*) at a temperature so as to condense the vapor along the conduit (*col. 5, lines 20-26*);

With regards to claim 3, Anderson teaches that the coolant source is configured to supply a liquid at a temperature so as to condense the vapor along the conduit (*cooling fluid, col. 5, line 15*).

With regards to claim 4, Anderson teaches that the coolant source is configured to supply a gas at a temperature so as to condense the vapor along the conduit (*cooling fluid, col. 5, line 15*).

With regards to claim 7, Anderson teaches that the coolant source includes:
a pump configured to move fluid (*col. 6, lines 64-66*); and
a cooling device configured to cool the fluid to the temperature (*elements 706 and 708, Figure 7*).

With regards to claim 8, Anderson teaches that the cooling device includes a compressor (*element 706, Figure 7*).

With regards to claim 9, Anderson teaches that the condenser includes a thermoelectric module (*col. 5, lines 33-34*).

With regards to claim 10, Anderson teaches that the printing system includes a blower configured to move the vapor along the condenser (*col. 7, lines 5-9*).

With regards to claim 12, Anderson does not expressly teach of an absorbing material. Berg teaches that the receptacle includes a condensate-absorbing material within the receptacle (*col. 1, lines 65-67*).

With regards to claim 13, Anderson does not expressly teach of an absorbing material. Berg discloses that the condensate-absorbing material is removable from the receptacle (*col. 4, line 7*).

With regards to claim 18, Anderson teaches that the ink dispenser includes an inkjet printhead (*col. 4, line 9*).

With regards to claim 19, Anderson teaches that the printing system includes a media handling system configured to transport individual sheets of material relative to the ink dispenser (*col. 4, lines 6-8*).

With regards to claim 21, Anderson teaches that the media handling system is configured to stack the individual printed upon sheets (*output tray 414, Figure 4*).

With regards to claim 22, Anderson teaches that the printing system includes a heater configured to heat the deposited ink, whereby vapor is produced (*col. 4, lines 44-50*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Anderson's receptacle to include the perforations of Berg. The motivation for doing so, as taught by Berg, is to allow water to evaporate out of the absorbent material so that there is adequate storage volume in the absorbent material (*col. 3, lines 49-54*).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claim 1 above, and further in view of Hoffman et al. (US 6771916 B2).

With regards to claim 5, Anderson does not expressly teach that the condenser includes a fin. Hoffman discloses a condenser that includes a fin thermally coupled to conduit (*col. 24, lines 40-43*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Anderson's condenser with Hoffman's thermally coupled fins. The motivation for doing so, as taught by Hoffman, is to radiate the heat from the condenser (*col. 7, lines 9-11*).

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claim 10 above, and further in view of Sakai (US 6512900 B2).

With regards to claim 11, Anderson does not expressly teach of an exhaust opening or a filter. Sakai discloses a printing system that includes:

a duct proximate a condenser (*element 10 proximate element 11, Figure 1*) and having an exhaust opening (*col. 4, lines 15-16*); and

a filter between the condenser and the exhaust opening (*element 12, Figure 1*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Anderson's duct system with Sakai's exhaust opening and filter. The motivation for doing so, is that unliquified vapor may be discharged particulates may be removed (*col. 4, lines 14-18*).

Claims 14, 16, 17, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claim 12 above, and further in view of Igval et al. (US 6357854 B1).

With regards to claim 14, Berg teaches does not expressly teach that the material is foam. Igval discloses that the absorbing material is typically foam (*col. 1, lines 57-59*).

With regards to claim 16, Anderson does not expressly teach that the receptacle is removably coupled to the printing system. Igval teaches of a receptacle that is removably coupled to the remainder of the printing system (*col. 4, lines 15-17 in combination with col. 6, lines 34-36*).

With regards to claim 17, Anderson does not expressly teach that the printing system includes a fill indicator. Igval teaches that it is common to include a fill indicator configured to indicate a volume of the receptacle that is filled with condensate (*col. 2, lines 4-10*).

With regards to claim 20, Anderson does not expressly teach that the media handling system is configured to handle sheets having a minor dimension less than 9 inches. Igval teaches that media handling systems that configured to handle sheets of material having a minor dimension less than 9 inches is well known (*envelopes, col. 1, lines 23-25*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Anderson and Berg's absorbing material to be the foam of Igval. The motivation for doing so, as taught by Berg, is to match the absorbent material composition with based on the type of fluid being collected (*col. 4, lines 55-57*). Further motivation, as given by Igval, is to keep the waste ink from splashing during handling of the printer (*col. 1, lines 57-61*).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson in view of Berg, as applied to claim 1 above, and further in view of Kim et al. (US 6101356).

With regards to claim 15, Berg teaches that the receptacle includes:

an inlet through which the condensate flows into the receptacle (*element 112, Figure 1*).

Neither Anderson nor Berg expressly teaches that the receptacle includes a movable closing portion. Kim discloses a closing portion movable between an inlet open position and an inlet closing position (*col. 8, lines 65-67*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to combine Anderson's invention with Berg's movable closing portion. The motivation for

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doing so, as taught by Kim, is to prohibit condensate movement to the receptacle as the level of condensate rises (*col. 9, lines 13-18*).

Claims 30, 33, 34, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brinkly (US 6397488 B1) in view of Berg et al. (US 6659587 B2).

With regards to claim 30, Brinkly teaches a method of printing ink upon a medium comprising:

depositing ink upon the medium (*col. 5, lines 31-32*);

heating the deposited ink to create a vapor (*col. 4, lines 47-50*);

condensing the vapor into a condensate (*col. 5, lines 45-46*); and

collecting the condensate in a first receptacle (*col. 5, lines 46-47*);

Brinkly does not expressly teach absorbing the condensate. Berg teaches:

absorbing at least a portion of the condensate into a first absorption member within the first receptacle (*col. 3, lines 49-50*).

With regards to claim 33, Brinkly does not expressly teach evaporating condensate within the receptacle. Berg discloses a printing method that includes evaporating a portion of the condensate within the first receptacle (*col. 3, lines 49-54*).

With regards to claim 34, Brinkly does not expressly teach replacing an absorption member. Berg discloses a printing method that includes replacing the first absorption member with a second absorption member (*col. 4, line 7*).

With regards to claim 39, Brinkly teaches that the step of depositing ink includes ejecting ink from an inkjet printhead upon the medium (*col. 1, lines 13-17 in combination with col. 3, lines 47-48*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Brinkly's receptacle with Berg's absorption member. The motivation for doing so, as taught by Berg, is to allow water to evaporate out of the absorbent material so that there is adequate storage volume in the absorbent material (*col. 3, lines 49-54*).

Claims 31, 32, and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brinkly in view of Berg, as applied to claim 30 above, and further in view of Anderson et al. (US 6176563 B1).

With regards to claim 31, Brinkly does not expressly teach circulating a fluid through a conduit to condense the vapor. Anderson discloses a printing method that includes circulating a fluid through a thermally conductive conduit having a condensing surface to cool the condensing surface to a temperature to condense the vapor (*col. 5, lines 15-27*).

With regards to claim 32, Brinkly does not expressly teach of a thermoelectric module. Anderson discloses a printing method that includes powering a thermoelectric module (*col. 5, lines 33-36*) having a cool portion (*element 330, Figure 3*) and a hot portion (*element 328, Figure 3*), wherein the cool portion is thermally coupled to a condensing surface along which the vapor is condensed (*col. 5, lines 37-40*).

With regards to claim 38, Brinkly does not expressly teach using a filter. Anderson teaches a printing method that includes directing the vapor across a condensing surface (*col. 4, lines 31-33*) and through a filter (*col. 4, lines 39-41*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Brinkly's condenser with Anderson's types of heat exchangers. The motivation for doing so is to provide different techniques for condensing the vapors into a liquid.

Claim 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brinkly in view of Berg, as applied to claim 30 above, and further in view of Igval et al. (US 6357854 B1).

With regards to claim 35, Brinkly does not expressly teach replacing the receptacle. Igval teaches replacing the first receptacle with a second receptacle when the first receptacle is filled with condensate (*col. 6, lines 34-36*).

With regards to claim 36, Brinkly does not expressly teach replacing the receptacle. Igval teaches sending the first receptacle, at least partially filled with condensate, to a collection entity for disposal (*col. 6, lines 22-24*).

With regards to claim 37, Brinkly does not expressly teach sensing an amount of condensate within the receptacle. Igval discloses that it is common to sense an amount of condensate within the receptacle (*col. 2, lines 4-10*).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Brinkly's receptacle with Igval's replacability. The motivation for doing so is to retain the printing system's functionality after the first receptacle becomes full.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 23-26 are rejected under 35 U.S.C. 102(b) as being anticipated by Berg et al. (US 6659587 B2).

With regards to claim 23, Berg teaches a condensate storage system comprising:

a receptacle having an inlet (*element 112, Figure 1*);

a condensate-absorbing member within the receptacle (*element 110, Figure 1*).

With regards to claim 24, Berg teaches that the receptacle is perforate to permit a portion of the condensate to evaporate (*col. 4, lines 13-15*).

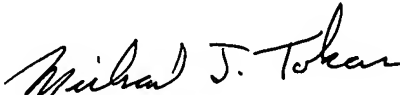
With regards to claim 25, Berg teaches that the receptacle and the condensate-absorbing member are configured to permit removal of the absorbing member from the receptacle (*col. 4, line 7*).

With regards to claim 26, Berg teaches that the system is configured for use in a printing system having an outer housing (*col. 2, lines 57-60*) and that the receptacle is configured to be removably received within the housing (*col. 4, line 21 inherently implies that the receptacle may be used outside of the housing, and is therefore configured to be removably received*).

Conclusion

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SLF


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